



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.
Well NORTH SIX 25C
Field WILDCAT
County WICHITA State KANSAS

Location: API #: 15-203-20229-00-00

SEC 25 TWP 17S RGE 35W
385' FSL & 865' FWL
SE - SW - SW

Other Services
CNL/CDL

Permanent Datum GROUND LEVEL Elevation 3175
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 3180
D.F. 3178
G.L. 3175

Date	8/23/13		
Run Number	ONE		
Depth Driller	5070		
Depth Logger	5074		
Bottom Logged Interval	5072		
Top Log Interval	00		
Casing Driller	220		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,100	
Density / Viscosity	9.4 / 56		
pH / Fluid Loss	10.0 / 9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.40 @ 78F		
Rmf @ Meas. Temp	0.30 @ 78F		
Rmc @ Meas. Temp	0.48 @ 78F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.25 @ 126F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	126F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	MAX LOVELLY		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

NABORS COMPLETION & PRODUCTION SERVICES

785-628-6395

THANK YOU FOR YOUR BUSINESS

DIRECTIONS: SCOTT CITY, KS. - WEST 8 MILES TO THE COUNTY LINE - NORTH 4 MILES TO RD. L - WEST 1/2 MILE NORTH INTO

0 Gamma Ray (GAPI) 150

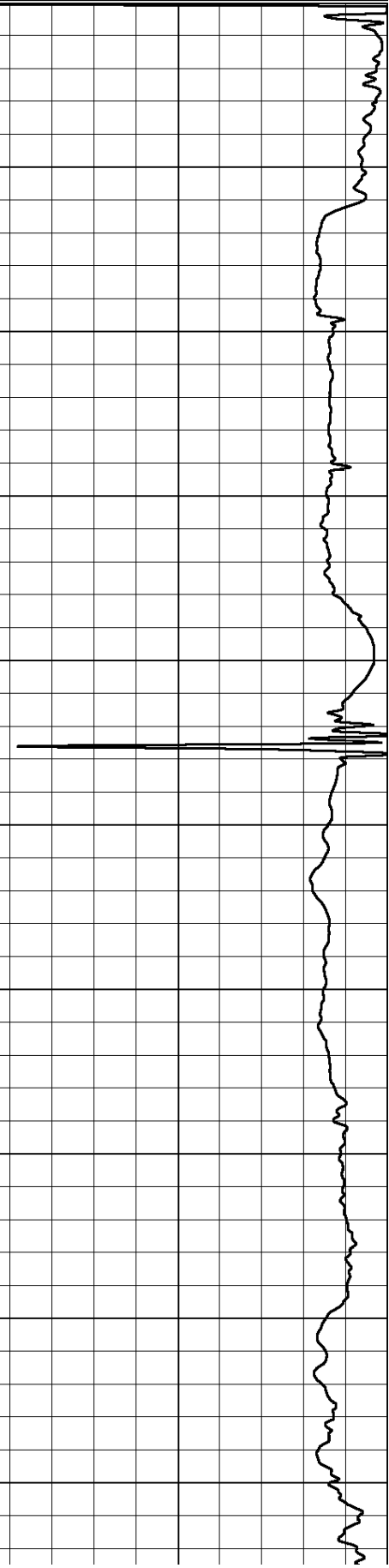
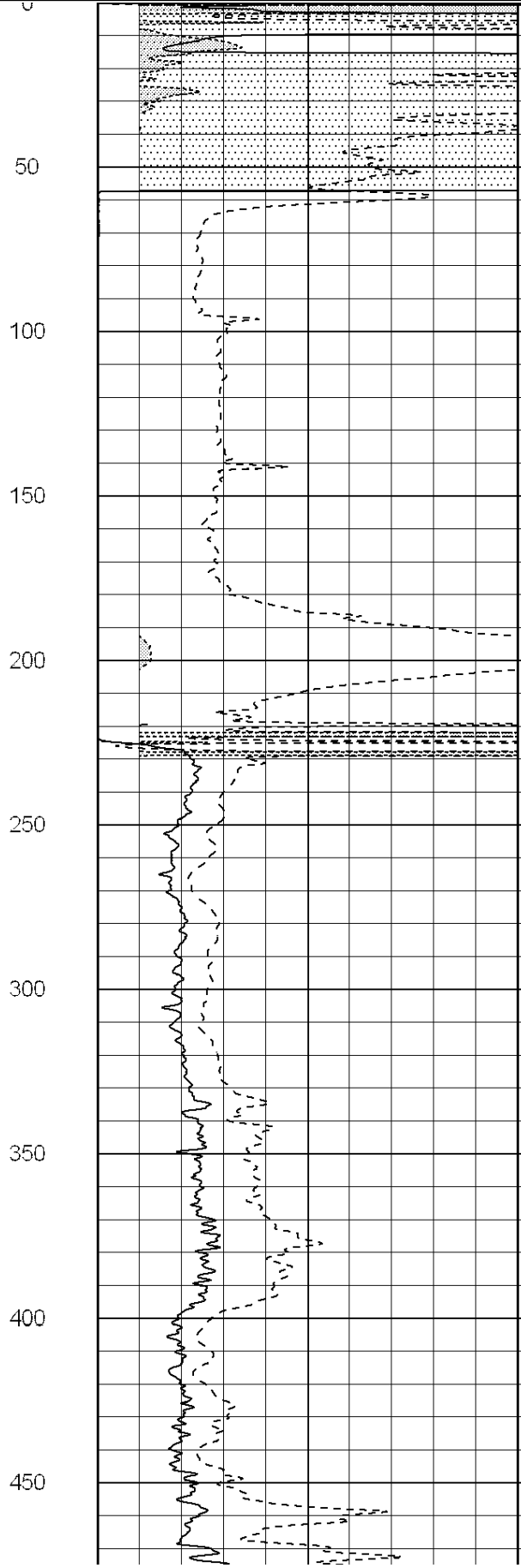
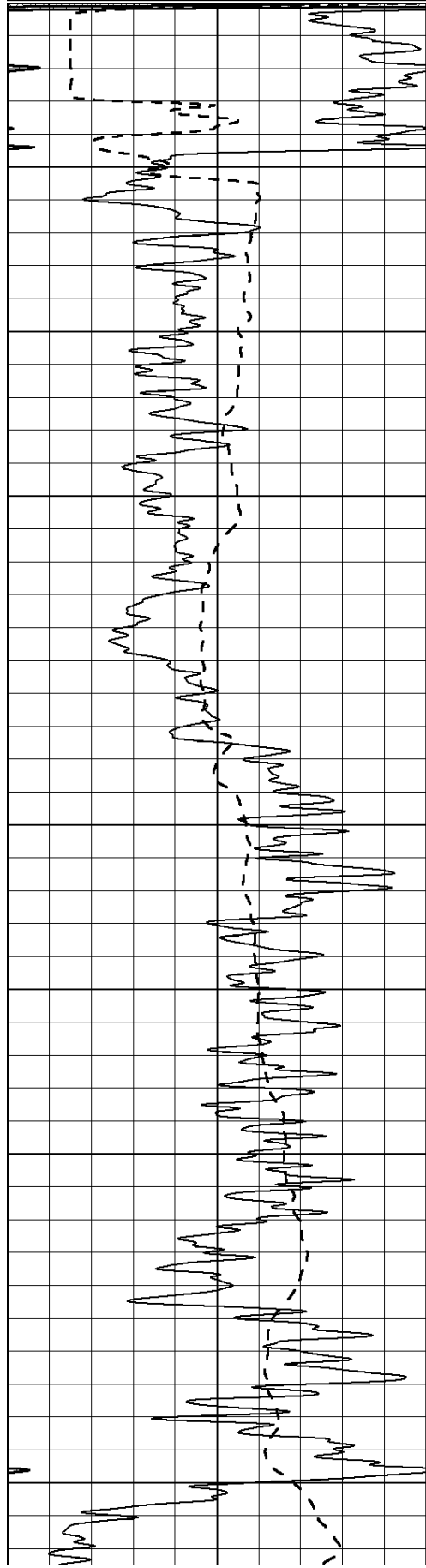
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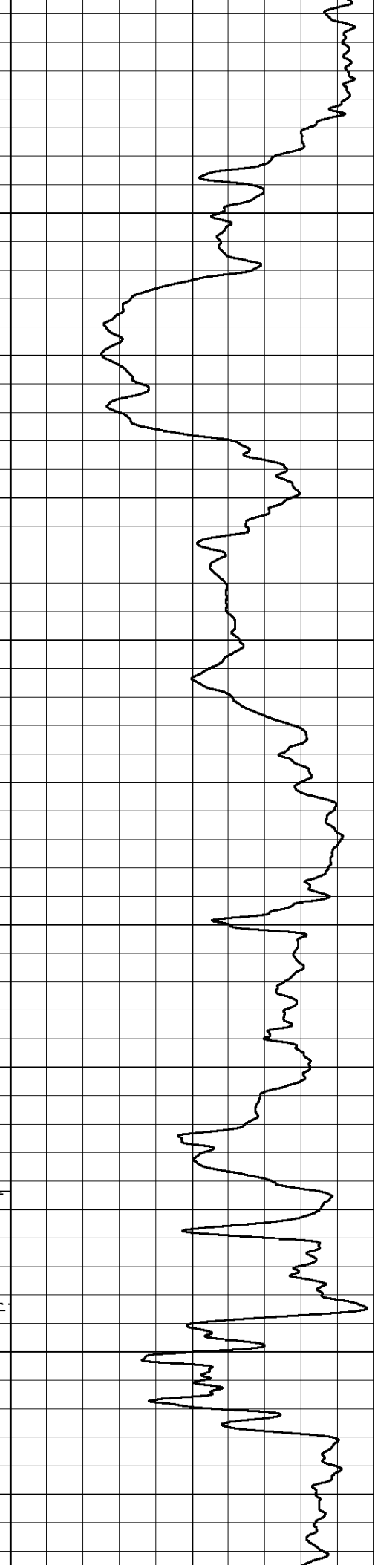
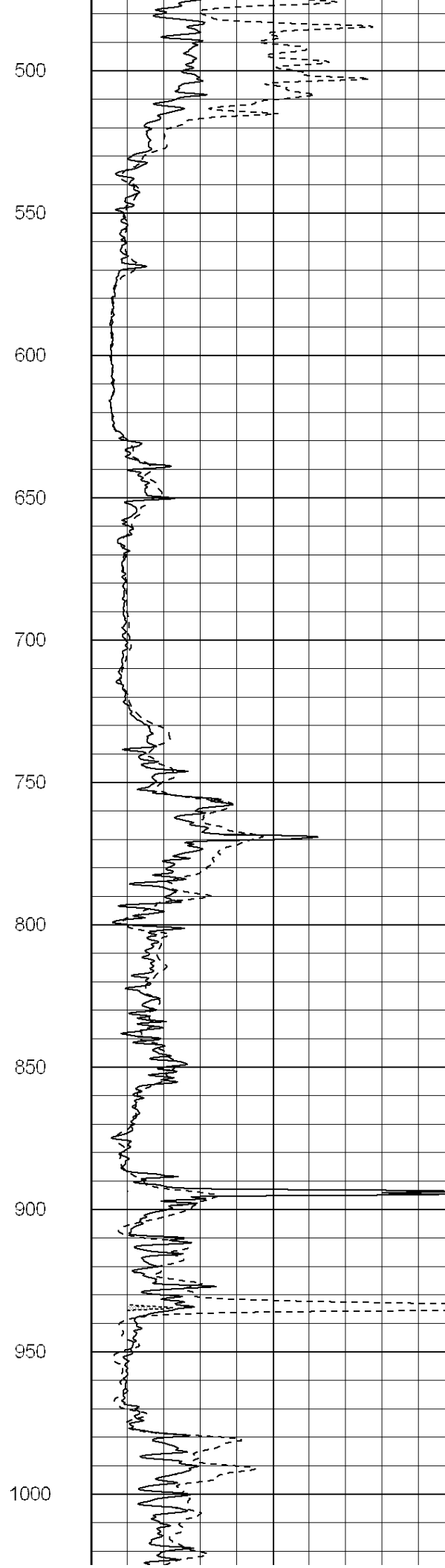
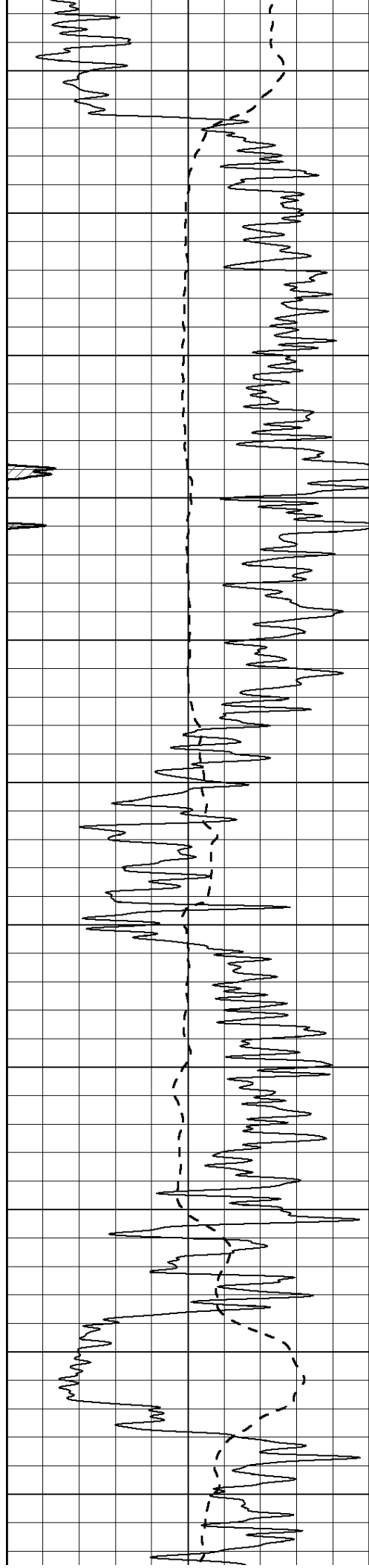
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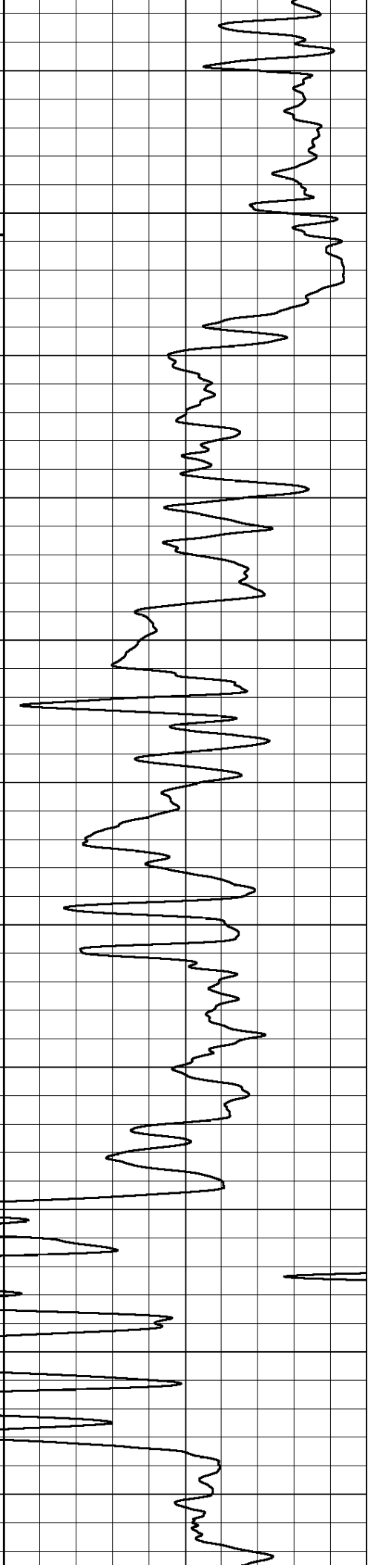
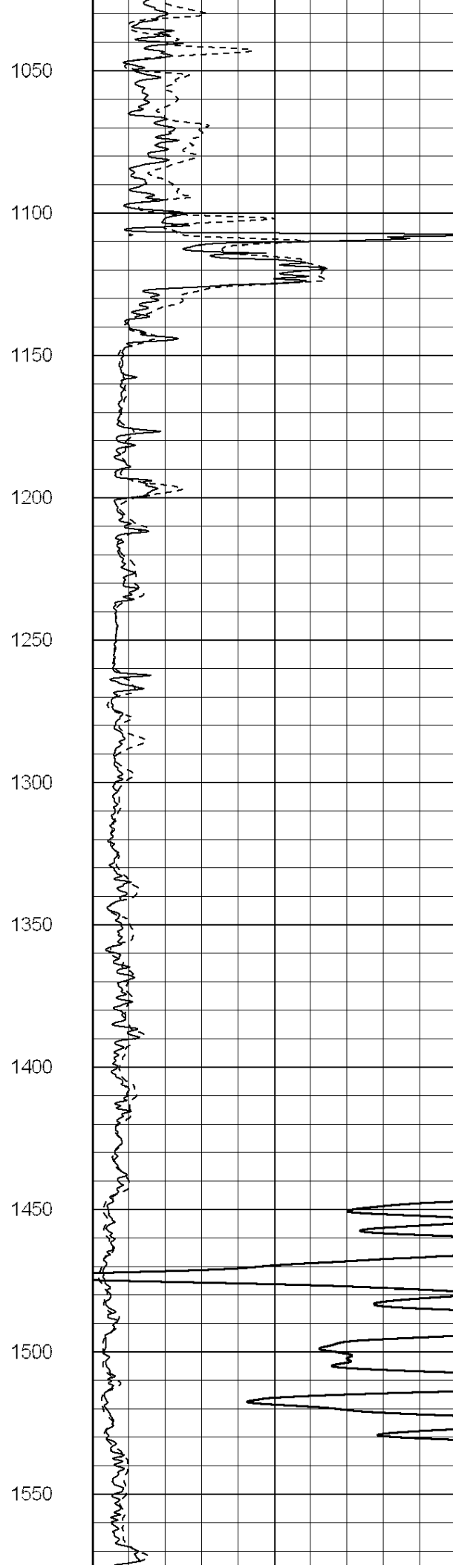
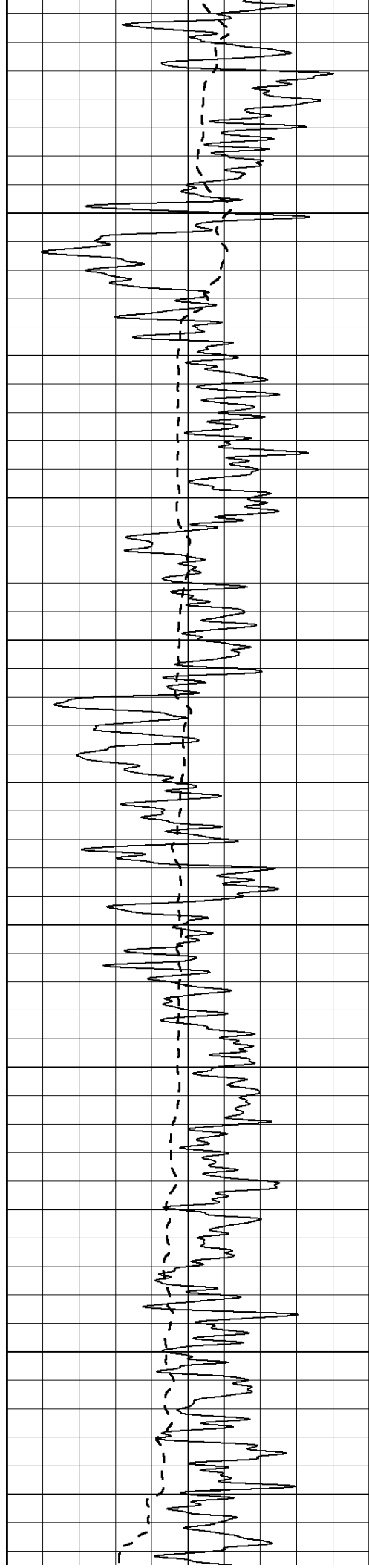
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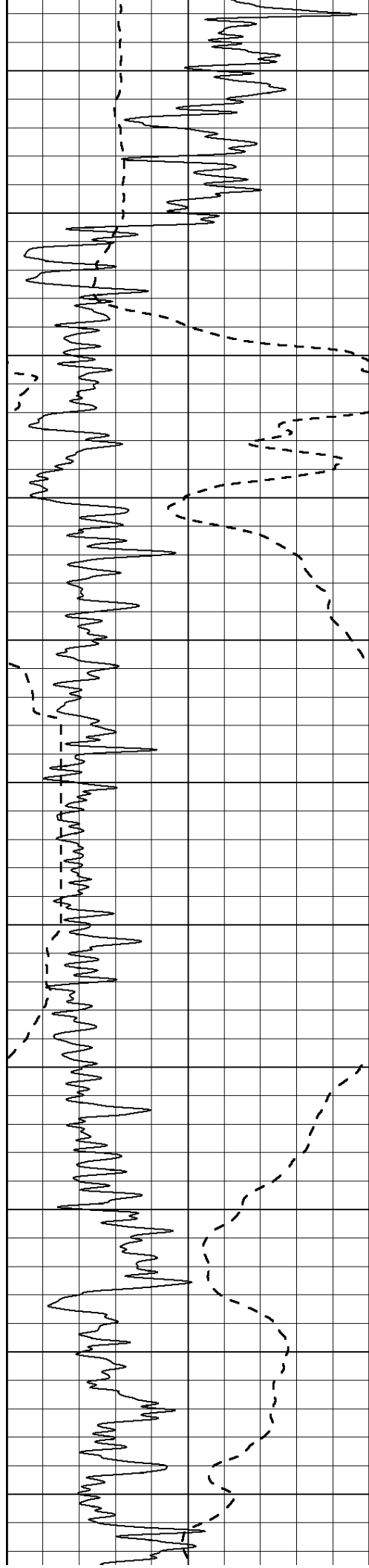
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50 RLL3 X10 (Ohm-m) 500

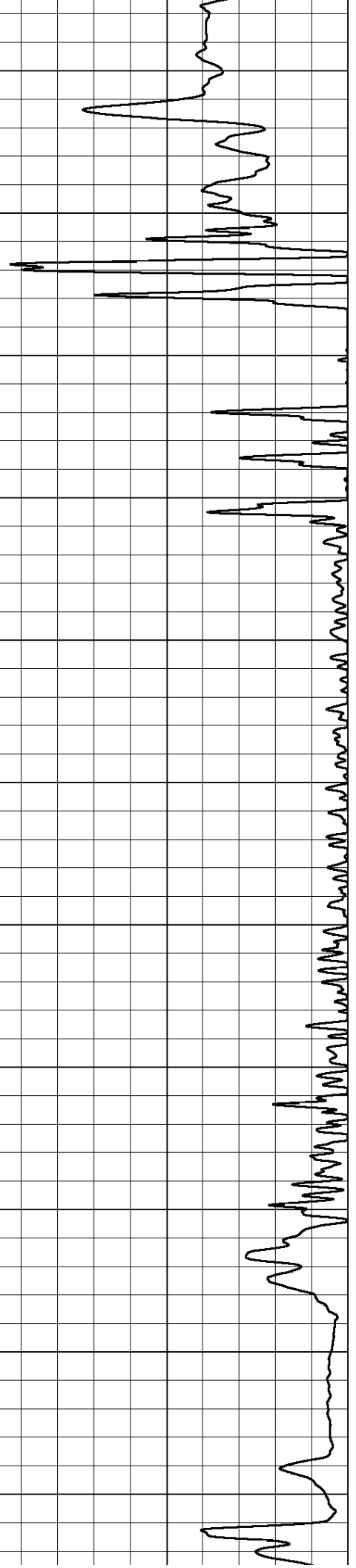
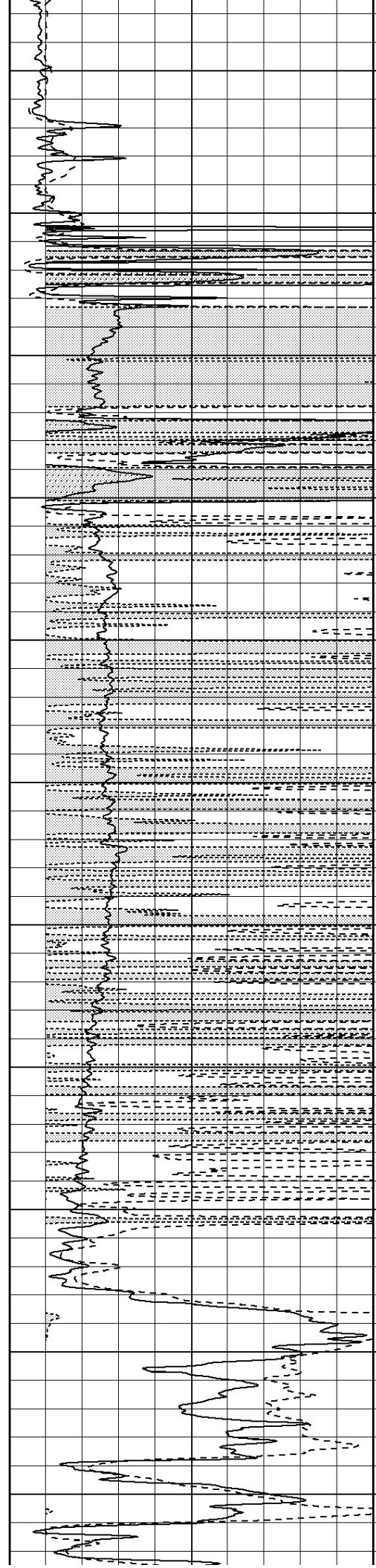


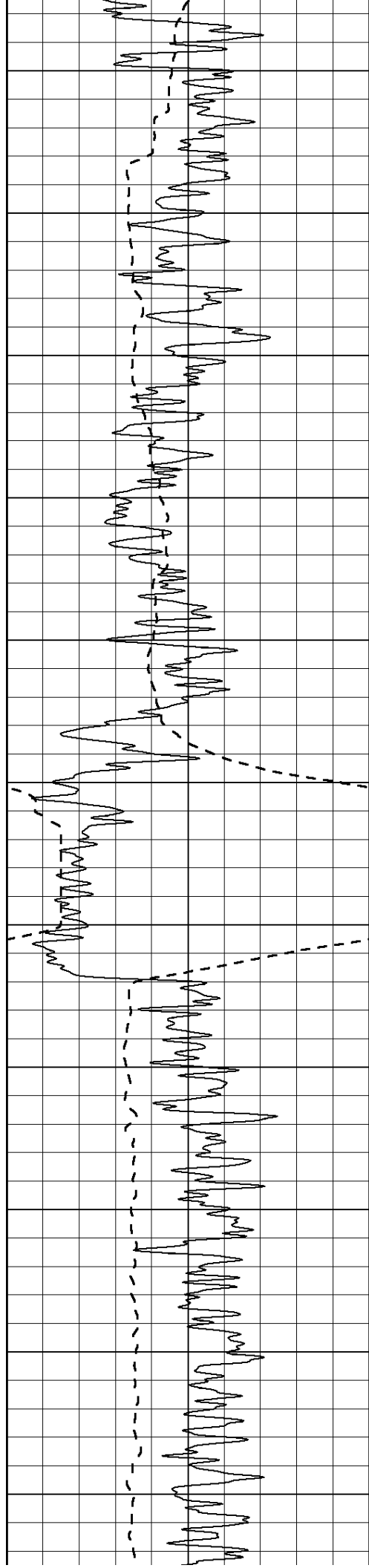




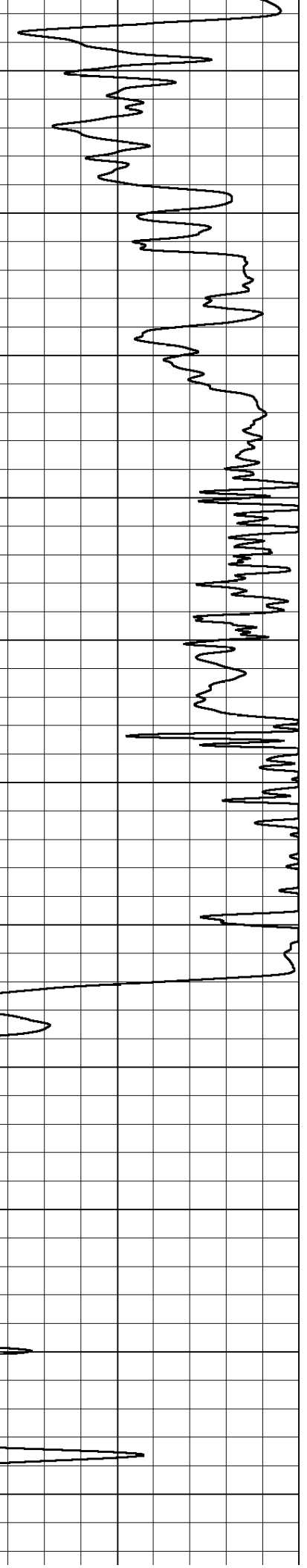
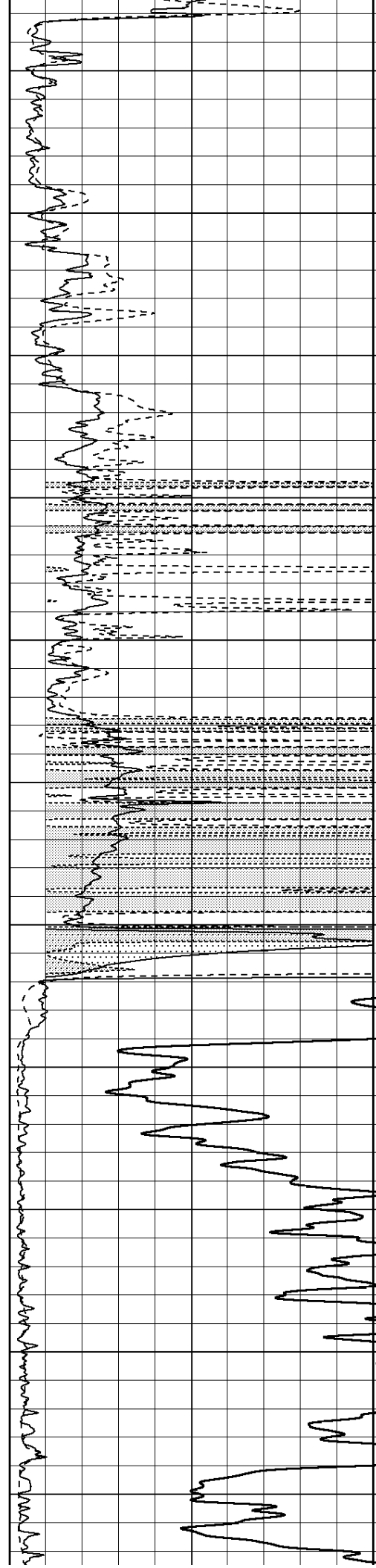


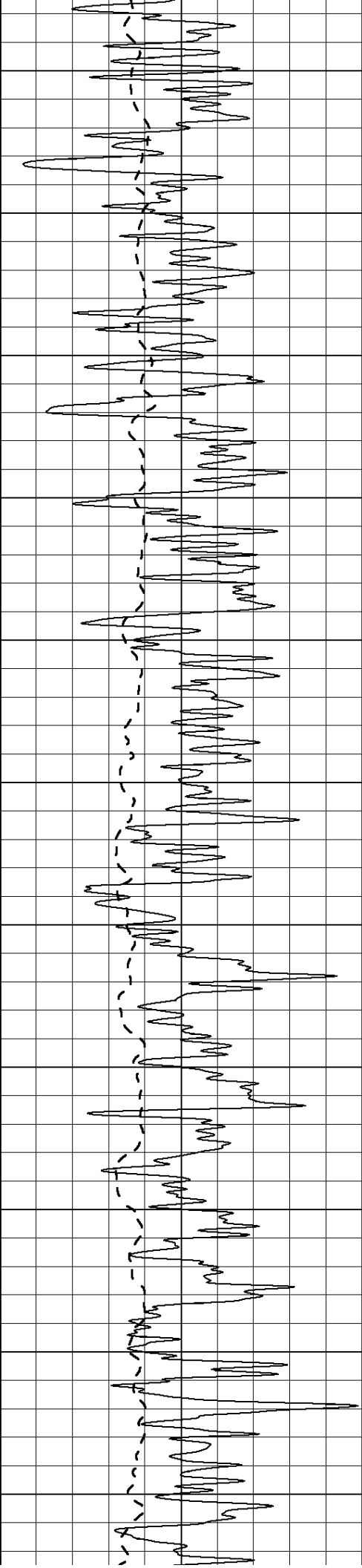
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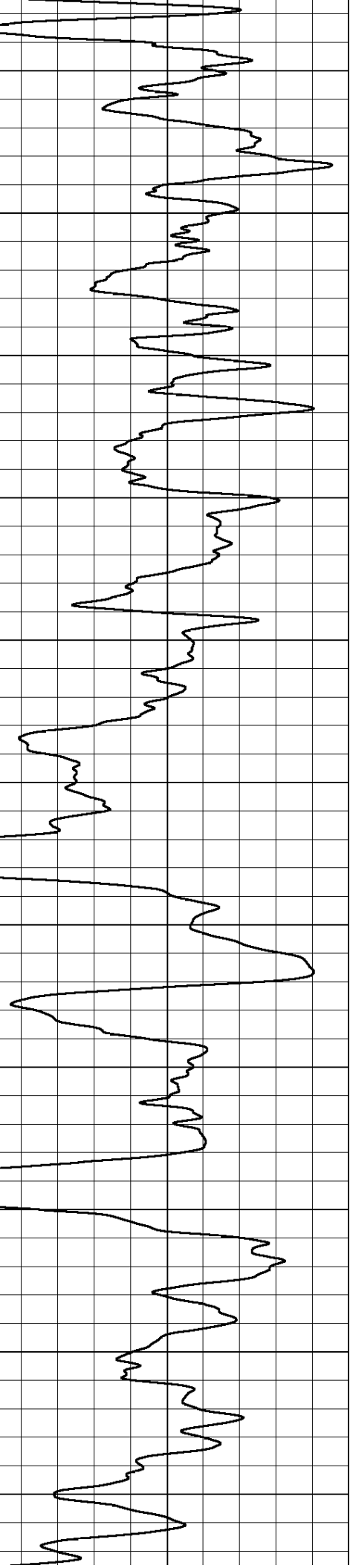
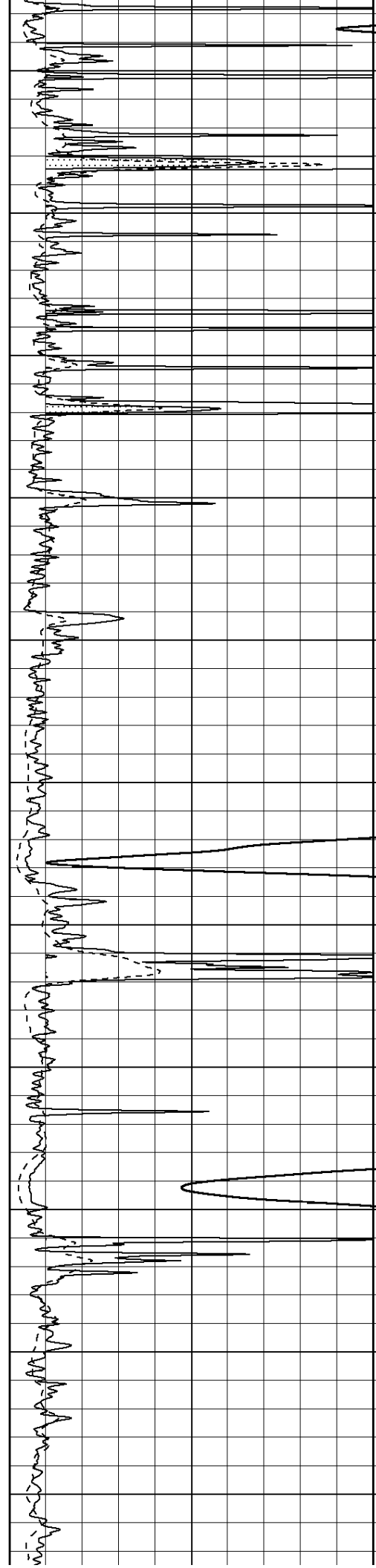


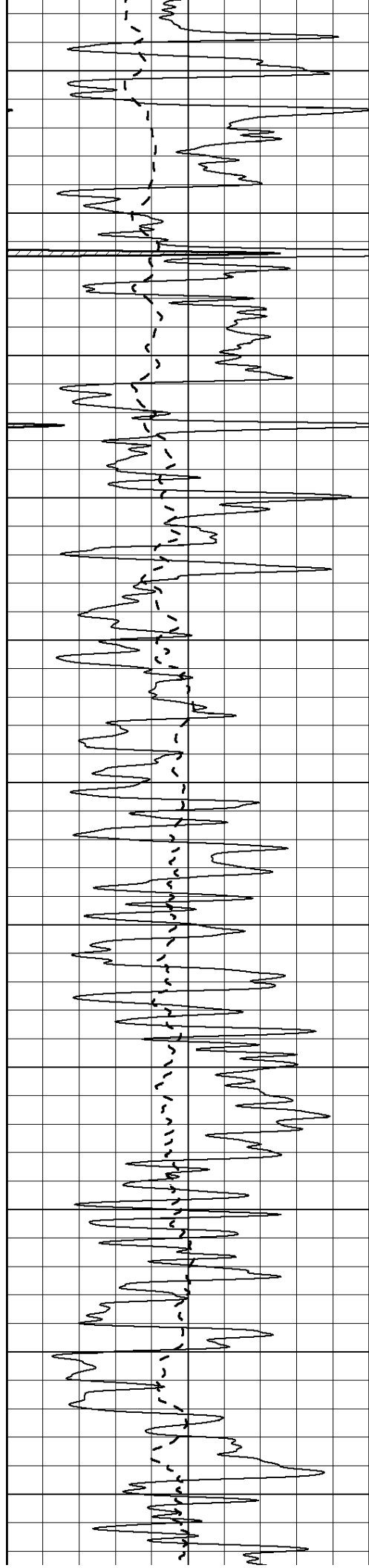
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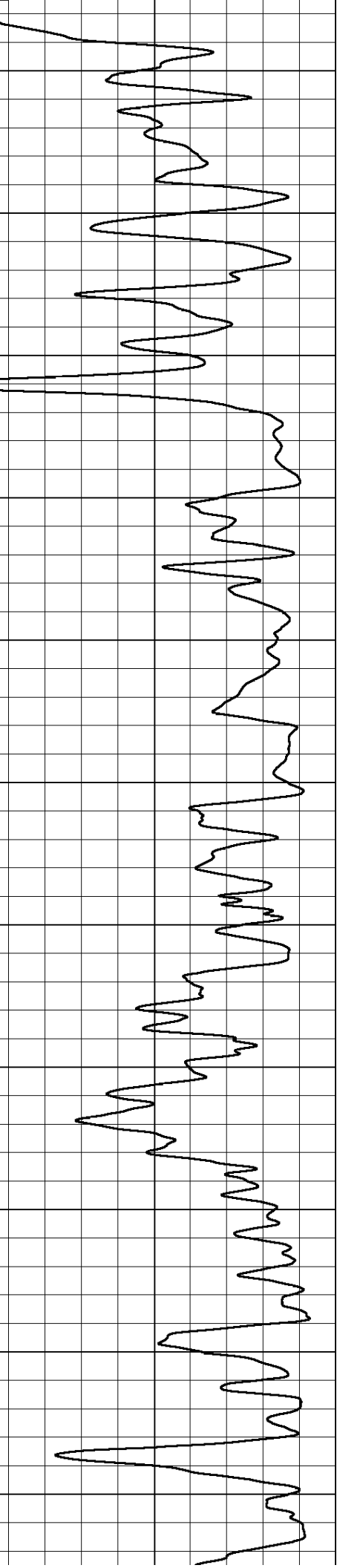
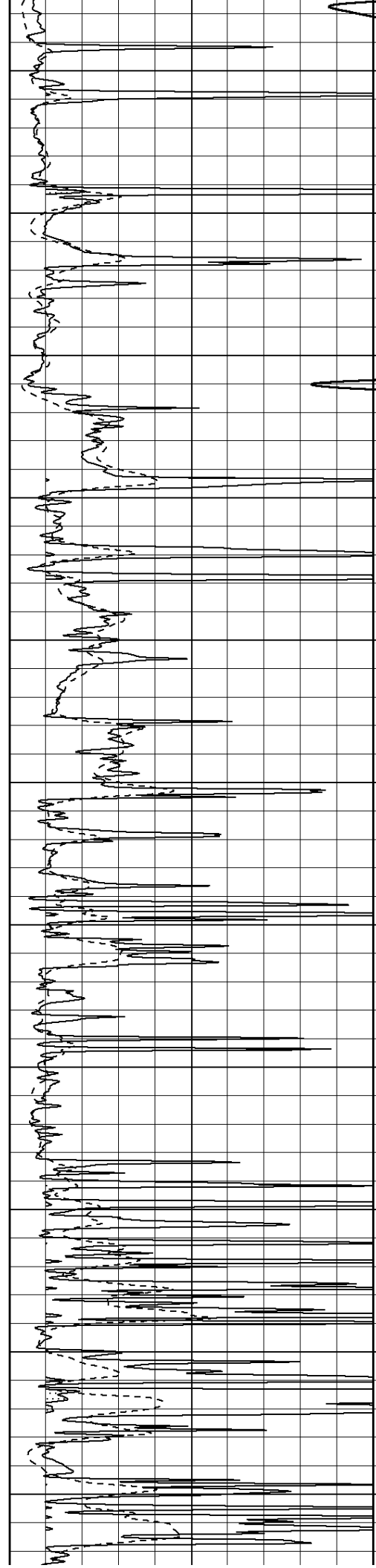


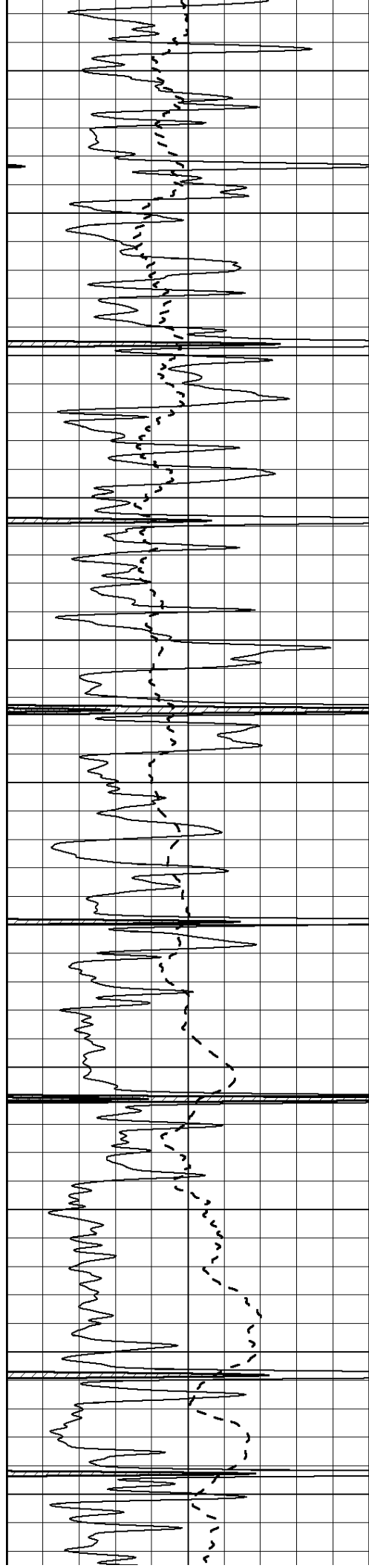
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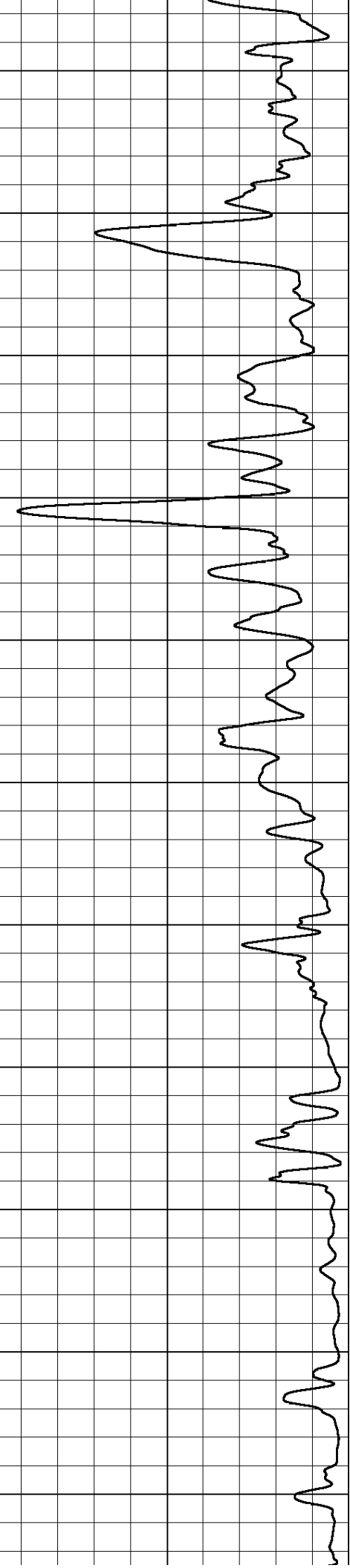
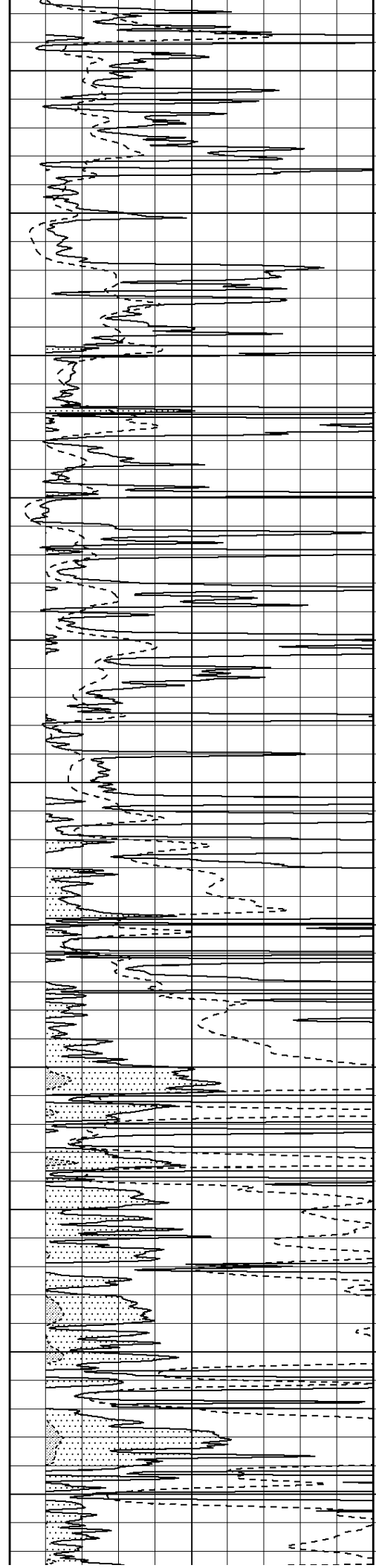


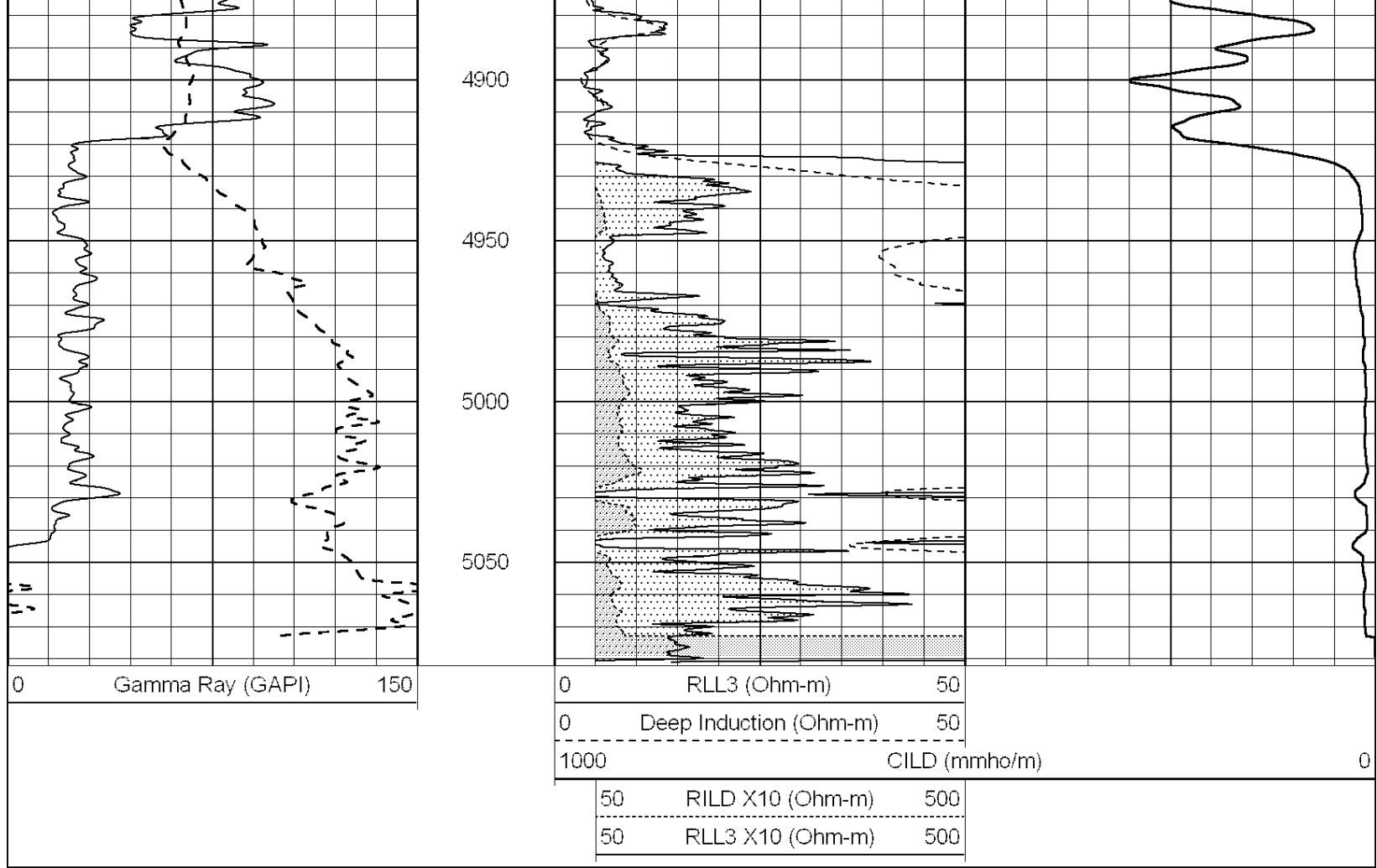
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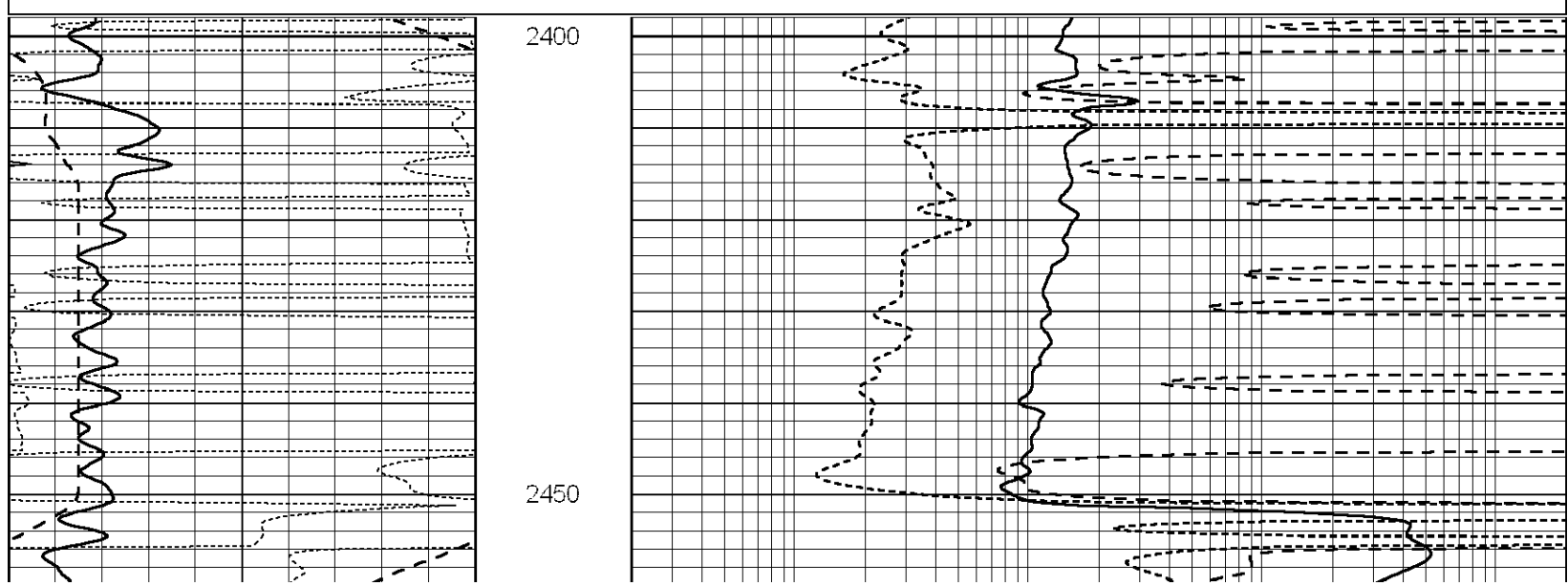
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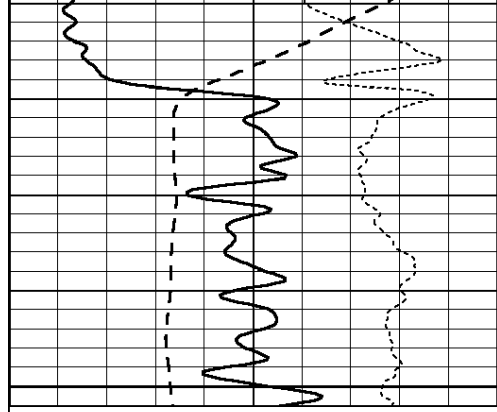




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 Presentation Format: _dil
 Dataset Creation: Fri Aug 23 10:49:51 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

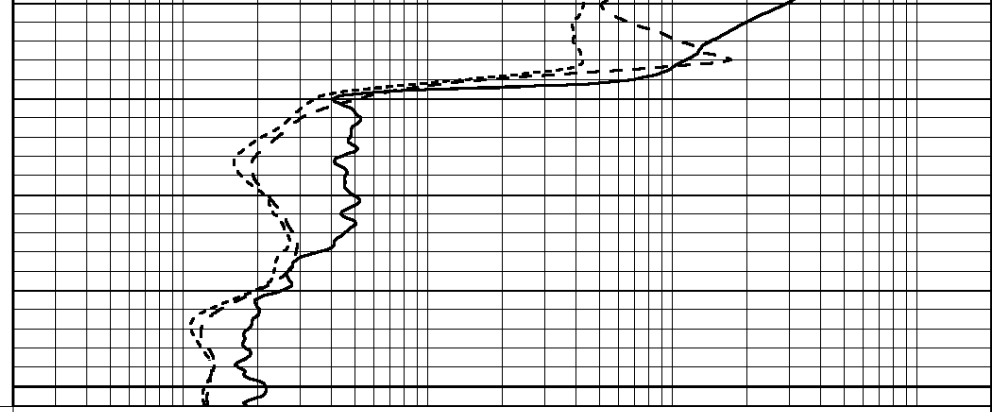
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-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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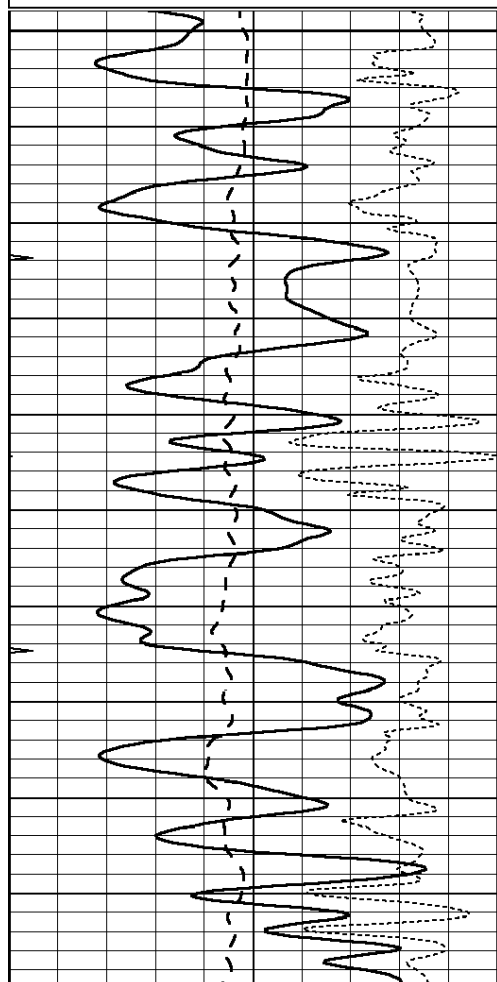


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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Database File: 011709ddn.db
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0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

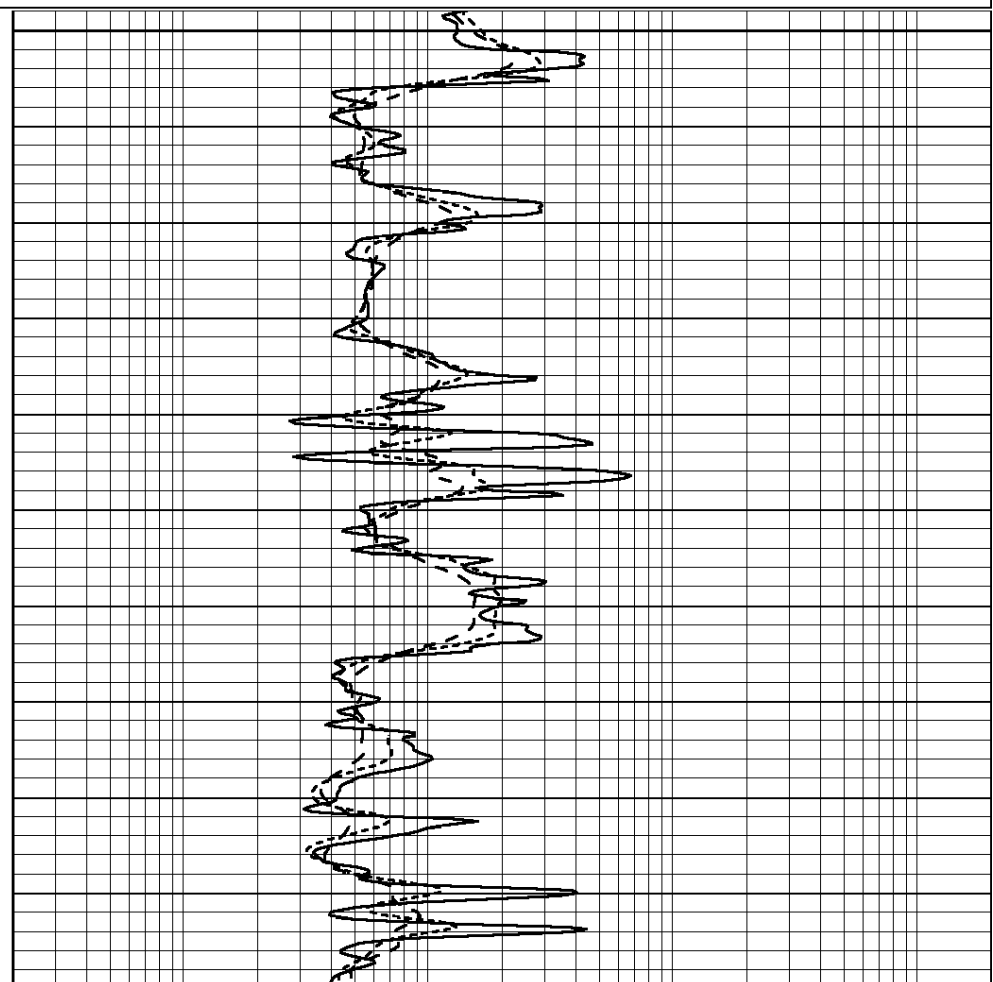
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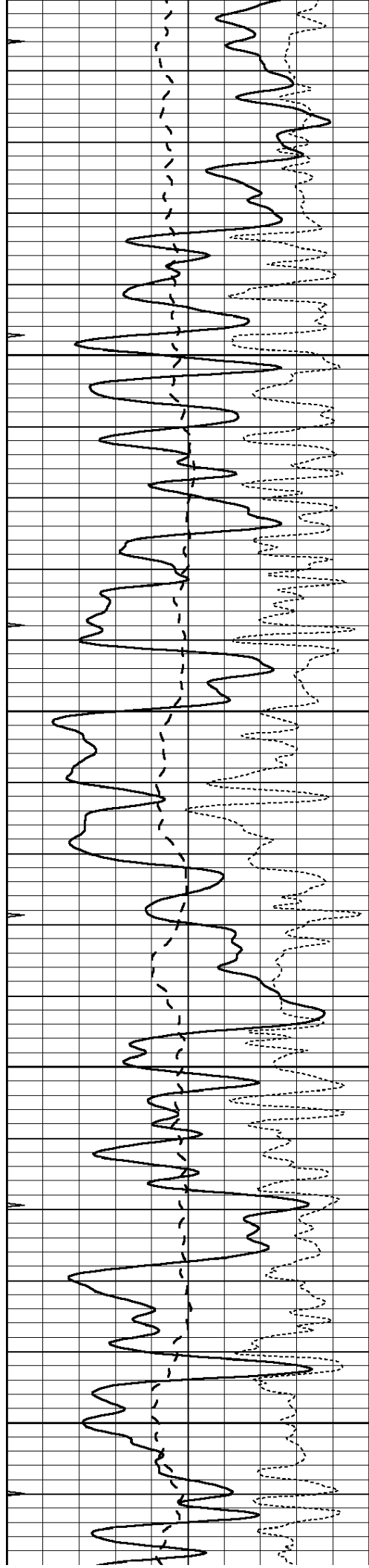


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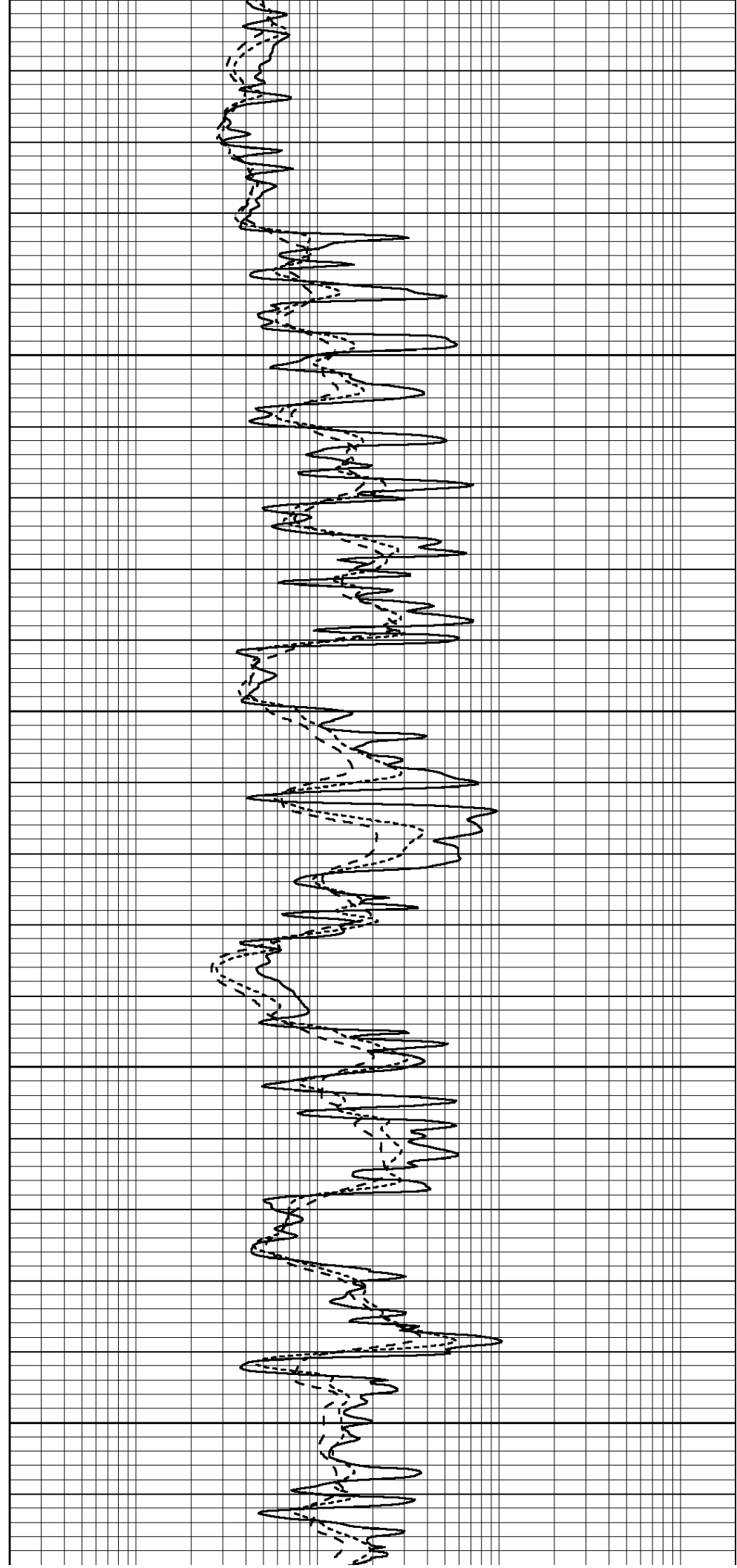
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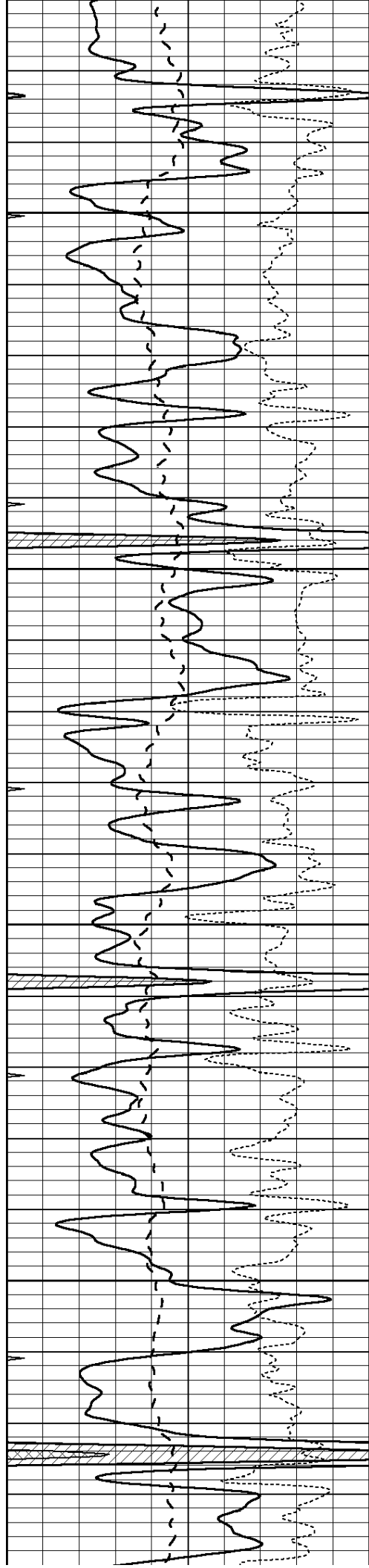
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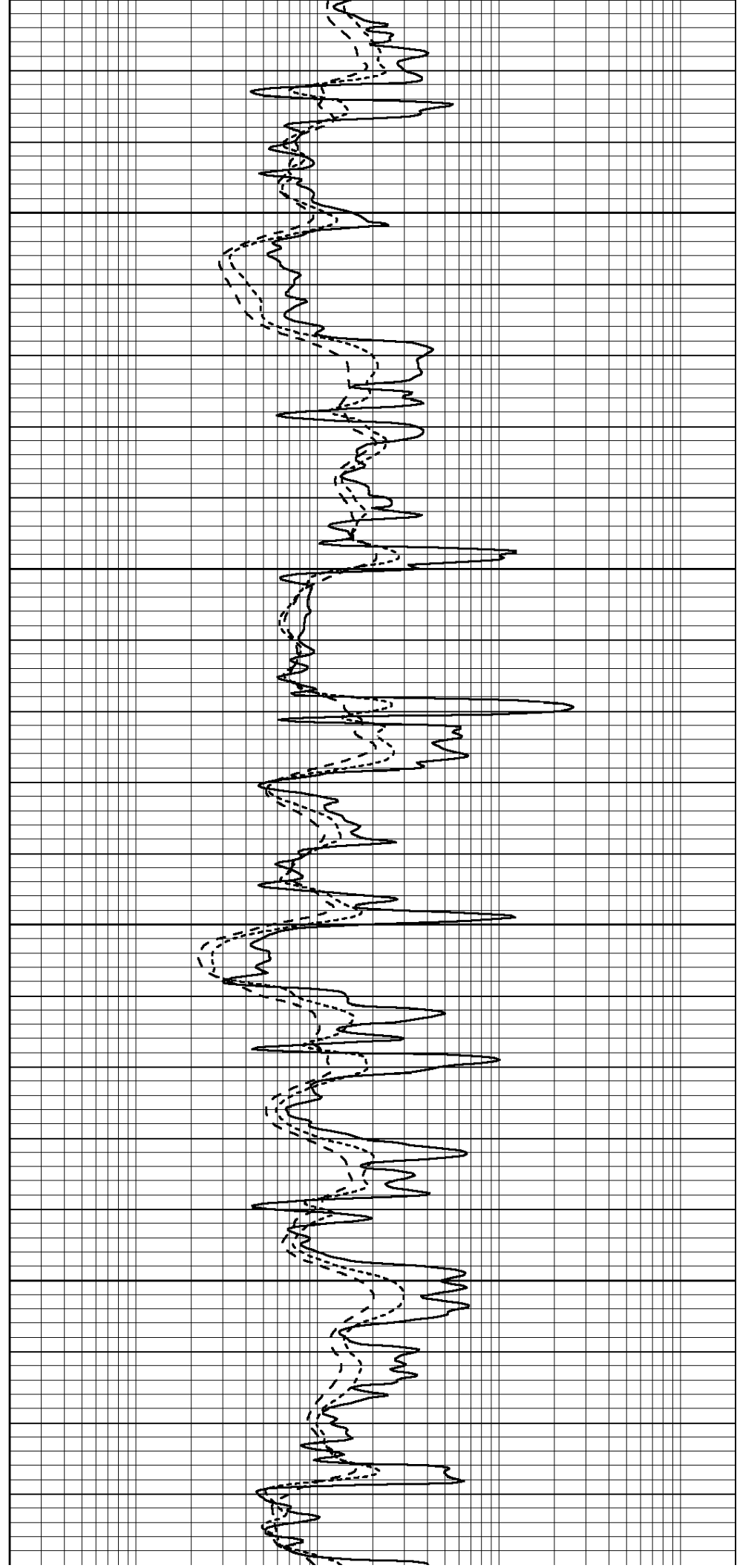


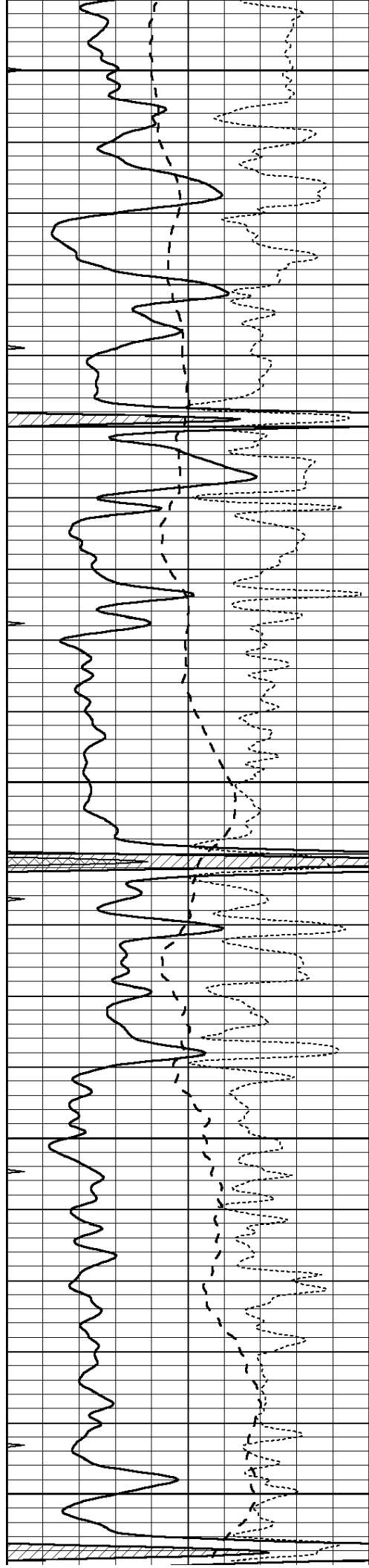
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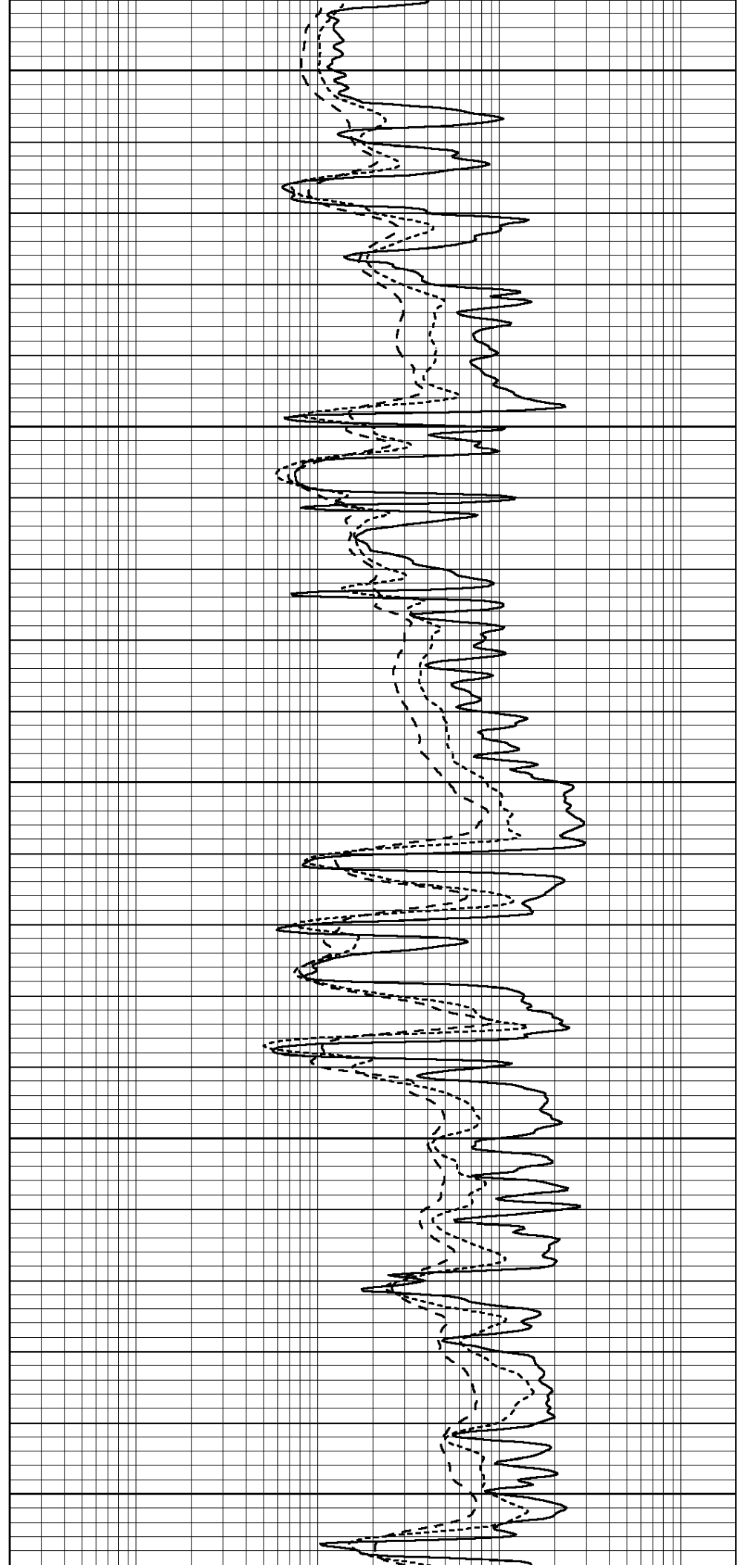
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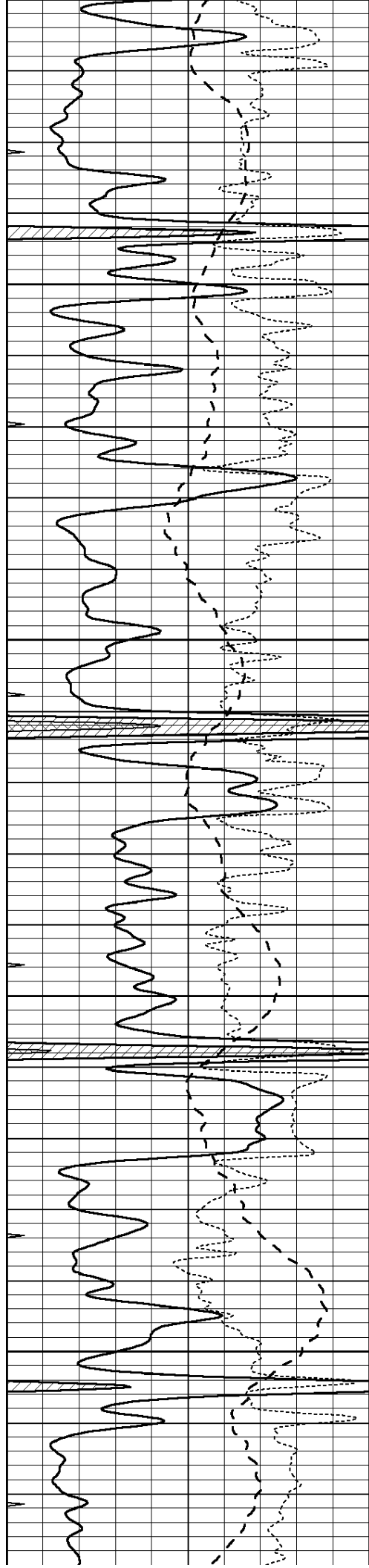
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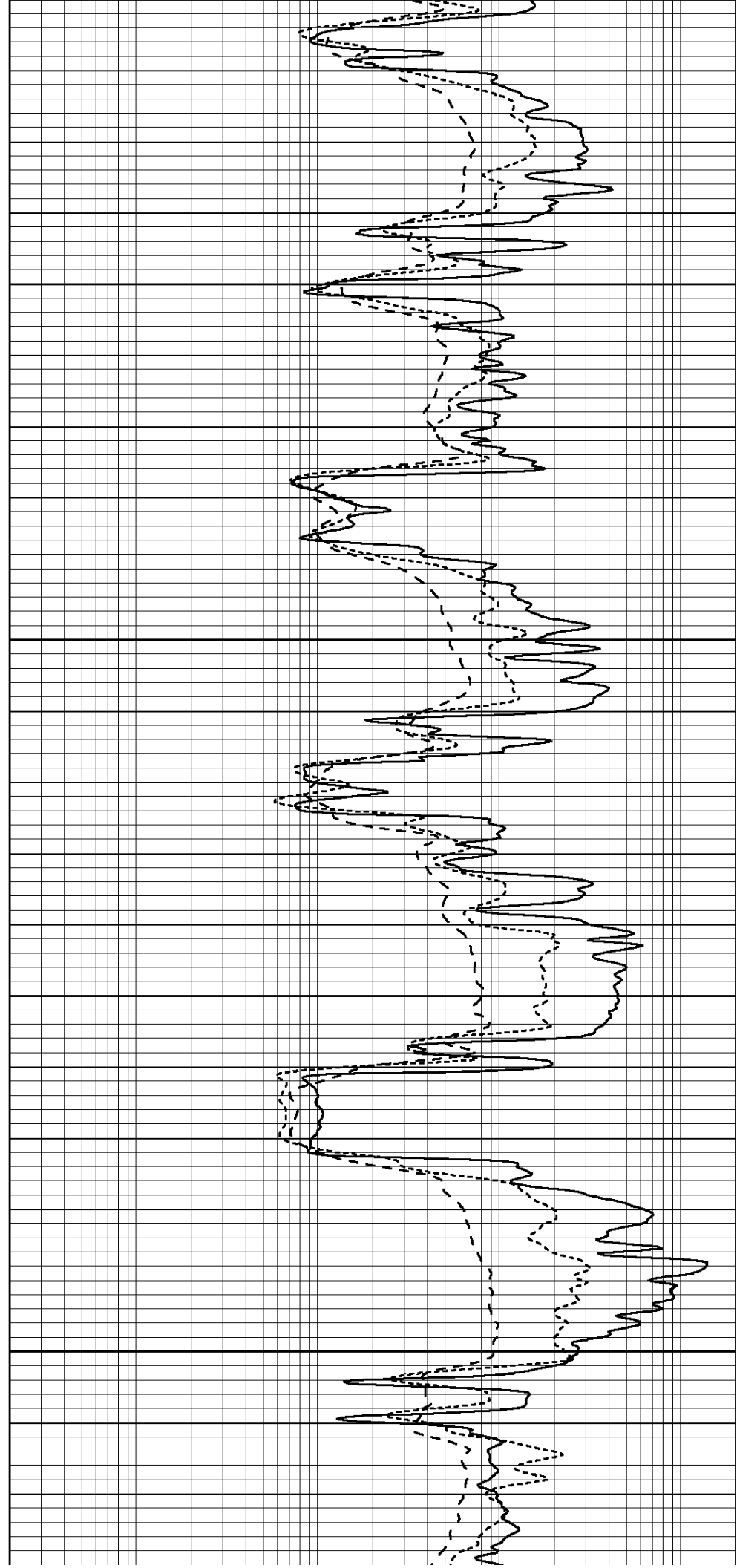


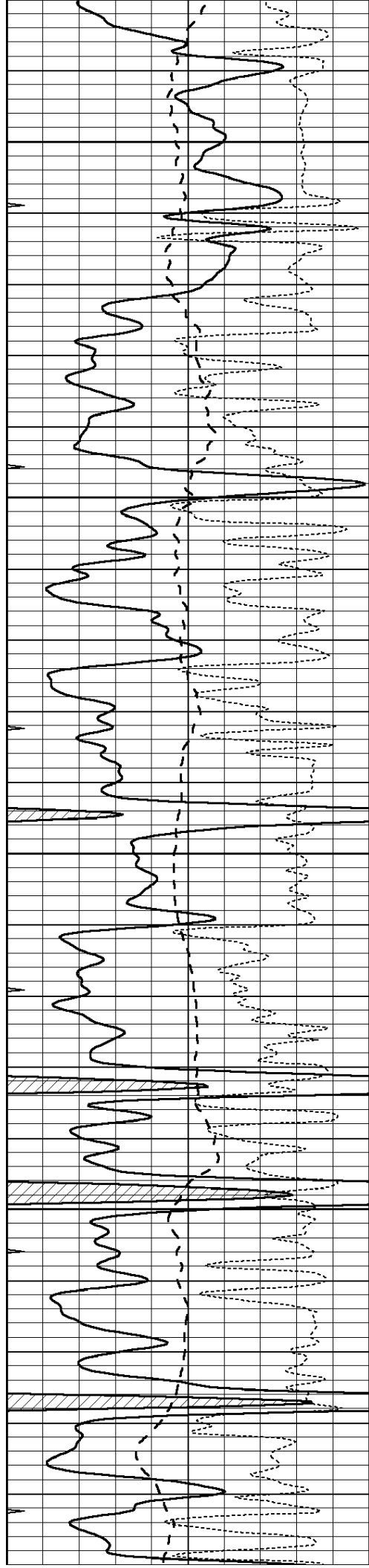
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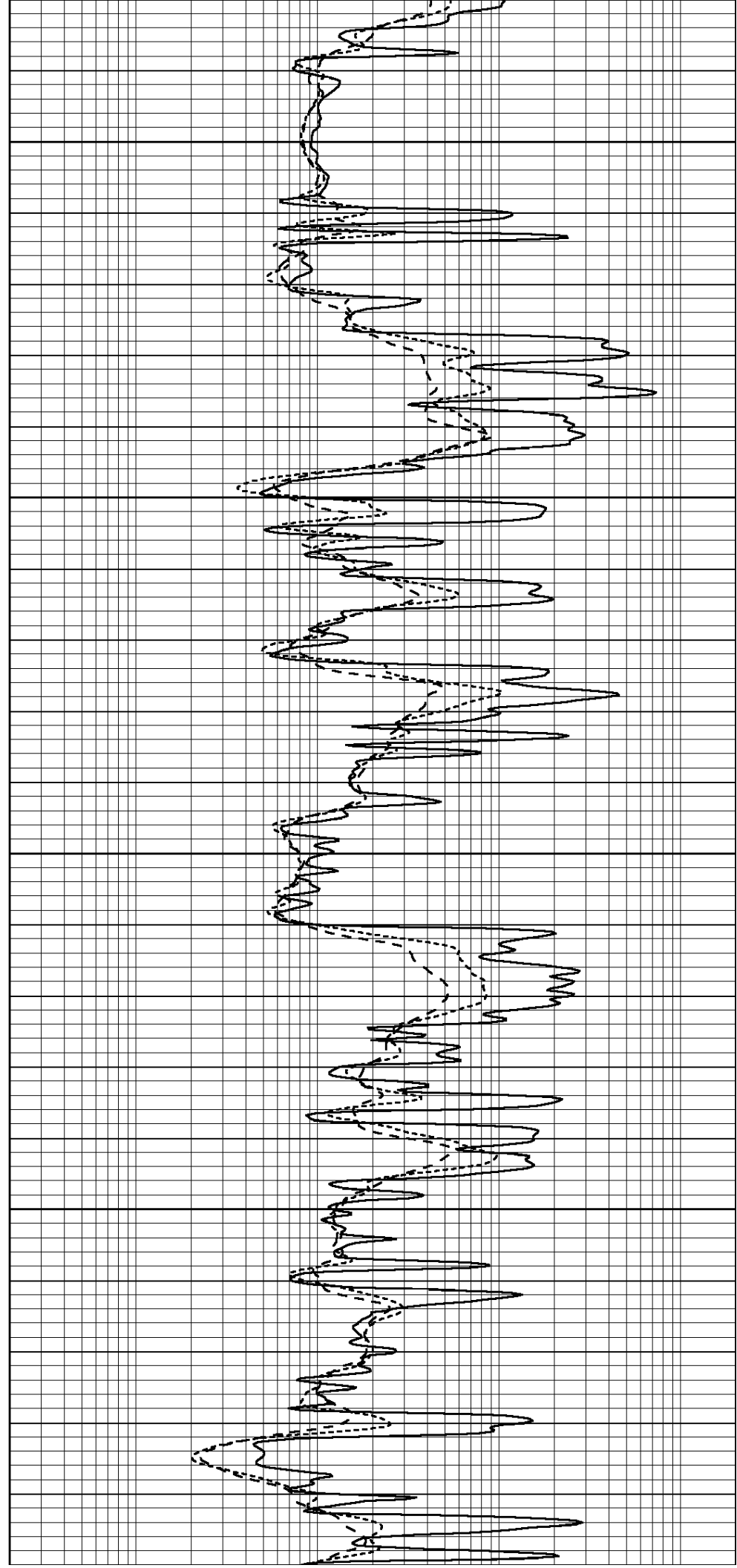
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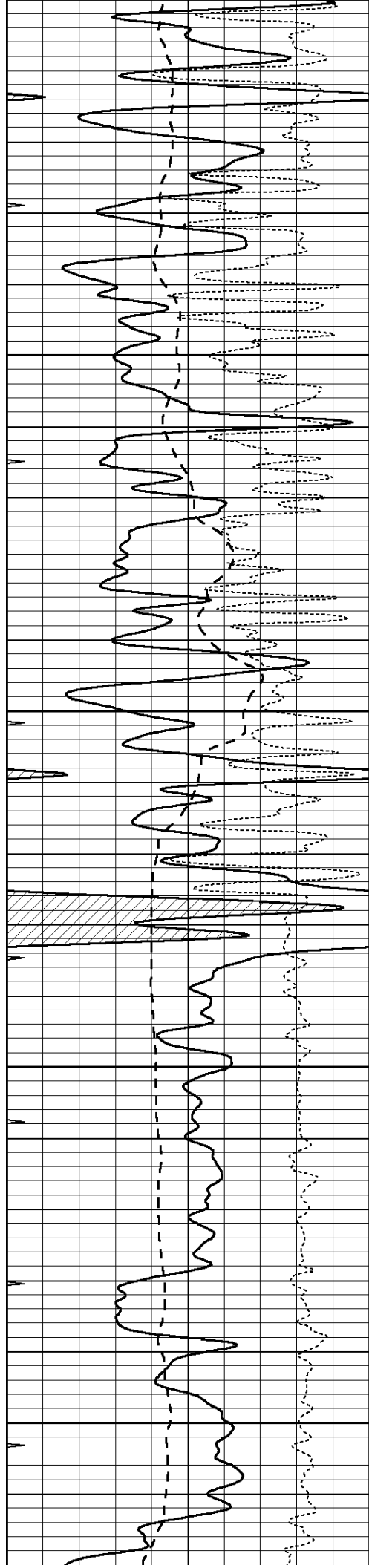
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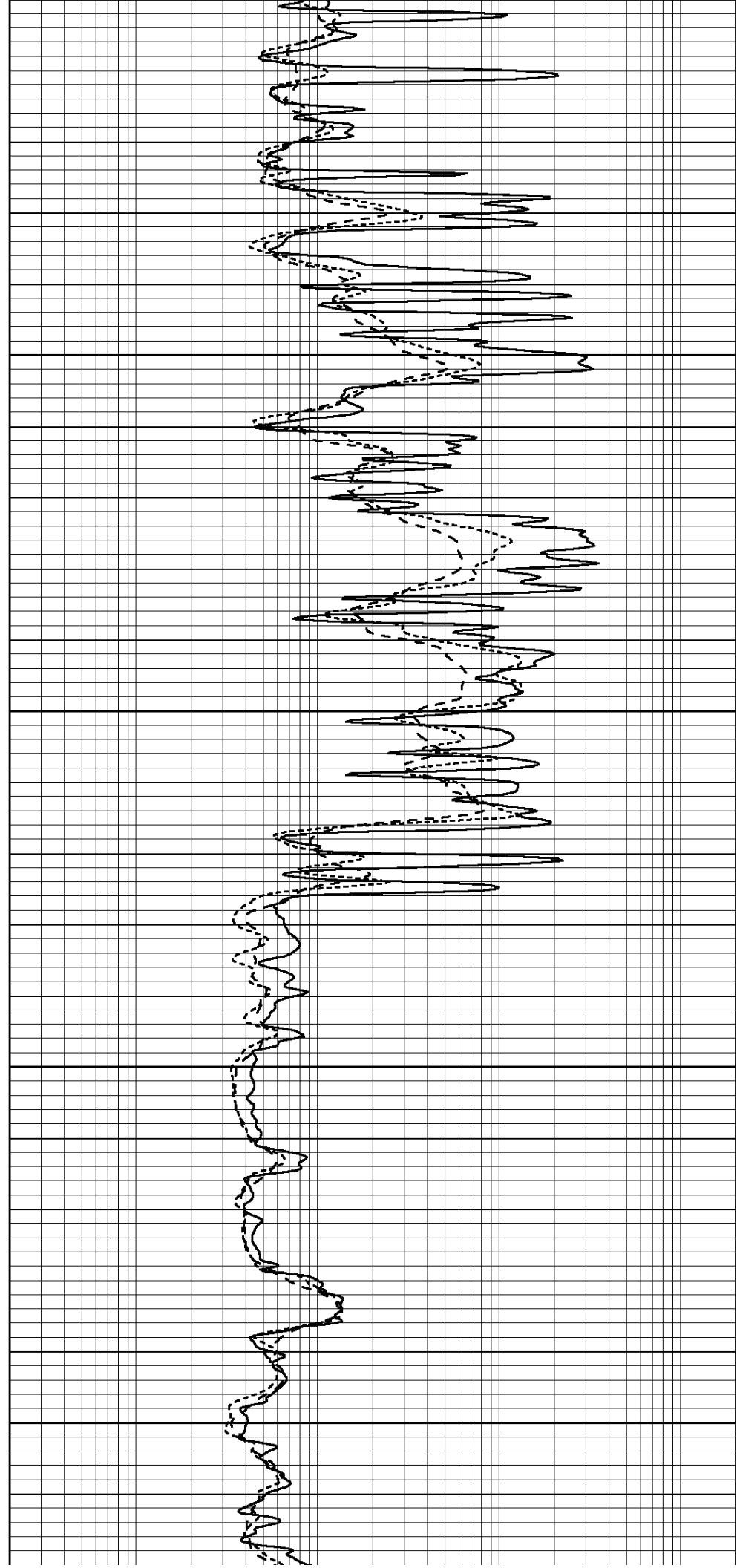
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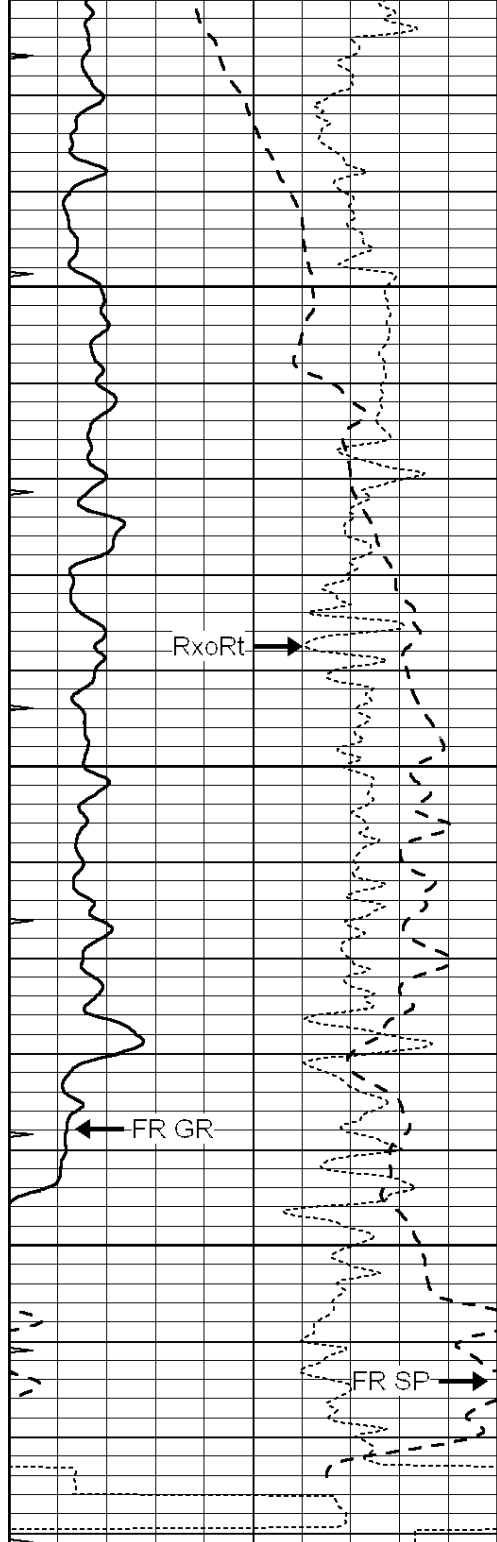
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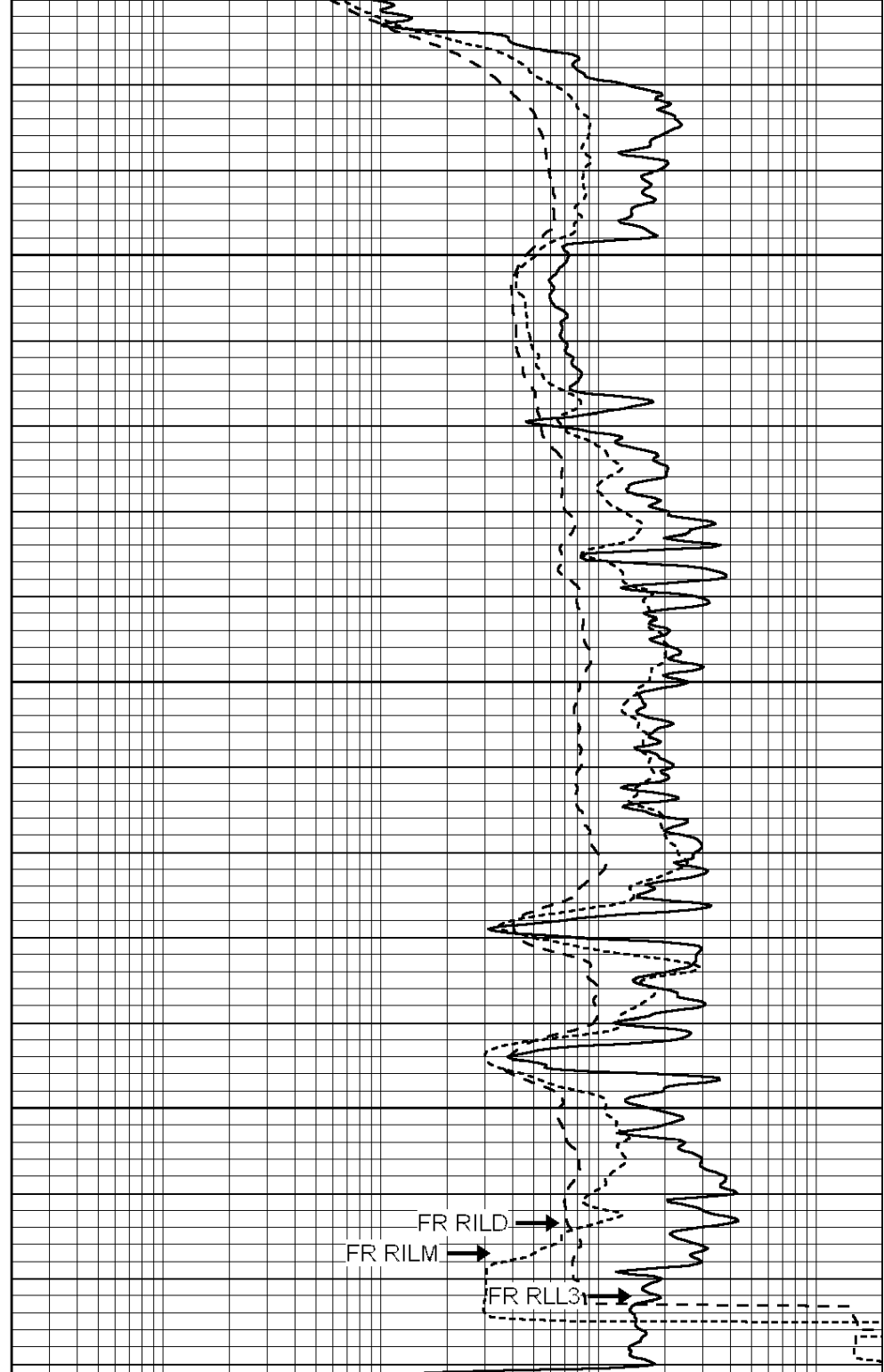
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LTD 5074

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-250	RxoRt	50
0	MINMK	20



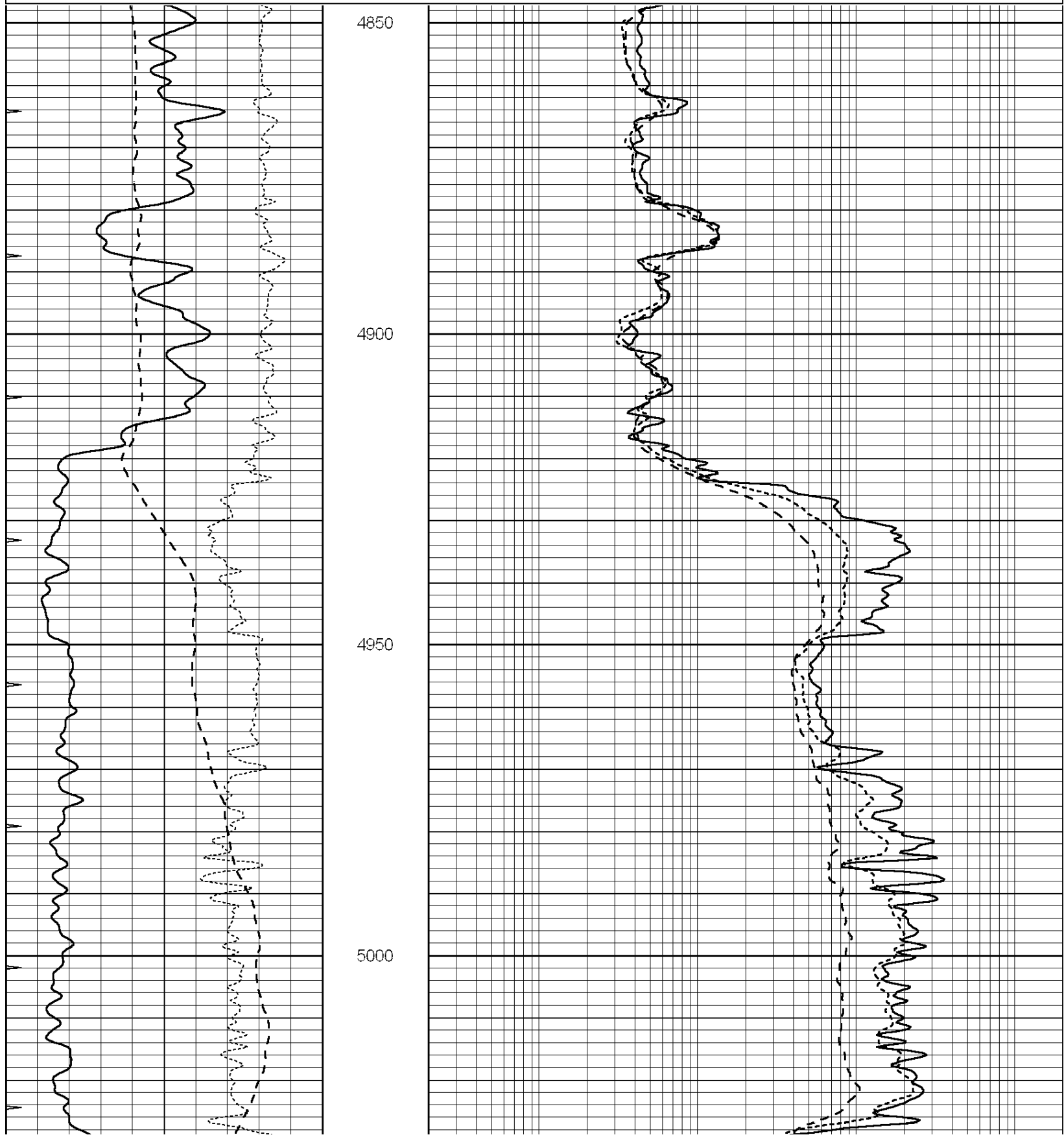
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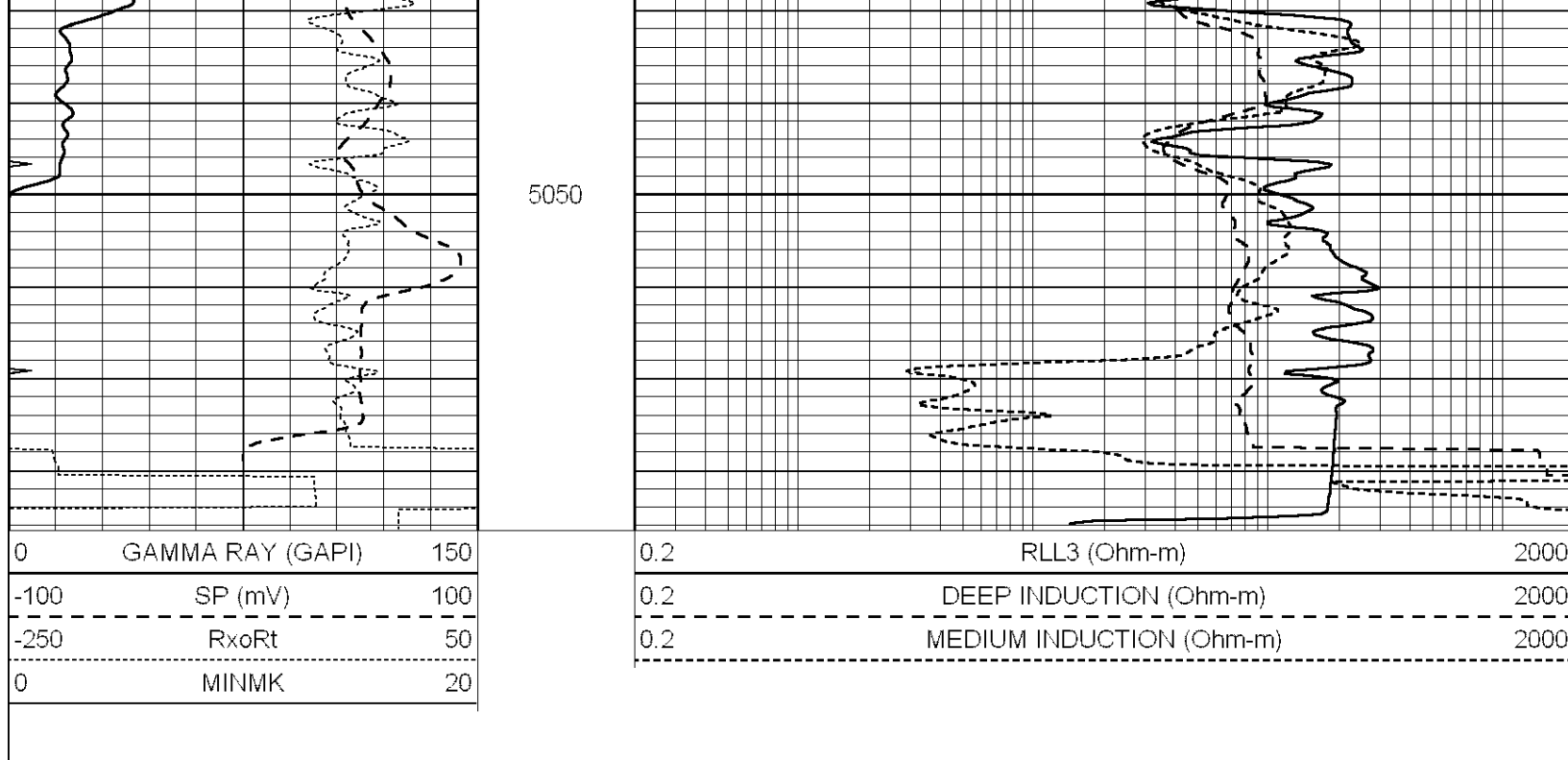


REPEAT SECTION

Dataset Pathname: pass2.9
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 Charted by: Depth in Feet scaled 1:240

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-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			





Calibration Report

Database File: 011709ddn.db
 Dataset Pathname: pass3.3.5
 Dataset Creation: Fri Aug 23 10:49:51 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Mon Aug 12 03:46:05 2013
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	500.000	35.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	560.000	-8.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'

Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR2-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Mon Aug 12 03:45:04 2013

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	923.76	475.45	cps
Aluminum	2.580	g/cc	205.31	331.69	cps
Spine Angle = 76.54			Density/Spine Ratio = 0.563		
	Size		Reading		
Small Ring	8.40	in	5.48	V	
Large Ring	14.00	in	7.58	V	

Compensated Neutron Calibration Report

Serial Number: NEU_4I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR5
Tool Model: OPEN
Performed: Fri Aug 16 02:46:42 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps